



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-1171; Project Identifier MCAI-2021-01361-Q; Amendment 39-21894; AD 2022-01-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Cameron Balloons Ltd. Fuel Cylinders**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Cameron Balloons Ltd. (Cameron) fuel cylinders installed on hot air balloons. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as quick shut-off (QSO) flanged adaptors manufactured with non-conforming (undersized) threads. This AD immediately requires either replacing the QSO flange adapter or inspecting the fuel cylinder for leakage and taking corrective action, and replacing the QSO flange adapter within 4 months. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Cameron Balloons Ltd., St Johns Street, Bedminster, Bristol, BS3 4NH, United Kingdom; phone: +44 0 117 9637216; email: [technical@cameronballoons.co.uk](mailto:technical@cameronballoons.co.uk). You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1171.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1171; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The street address for the Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Mike Kiesov, Aviation Safety Engineer, FAA, General Aviation & Rotorcraft Section, International Validation Branch, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4144; email: [mike.kiesov@faa.gov](mailto:mike.kiesov@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom, has issued CAA AD G-2021-0014R1-E, dated December 10, 2021 (referred to after this as “the MCAI”), to address an unsafe condition for certain Cameron fuel cylinders. The MCAI states:

Certain Cameron Hot Air Balloon fuel cylinders are supplied with liquid offtakes that consist of a quarter turn ball valve mounted on a flanged adaptor ([part number] P/N CB437, see [CAA AD] figure 1). Two recent batches of these adaptors have been manufactured with non-conforming (undersize) threads.

In certain cases, when the minimum sized adaptors are combined with cylinder bosses at maximum tolerance dimension and assembled to fuel cylinders, the thread can impinge (“bottom out”) on the cylinder boss. Although the required tightening torque value can be achieved at installation, the torque required to unscrew the flange could be below the minimum value. In extreme cases the adaptor may be unscrewed by hand.

This condition, if not detected and corrected, could result in an uncontrolled release of liquid propane which in turn could result in a fire hazard that could damage the balloon and its envelope, ultimately leading to a forced emergency landing, during which balloon occupants and persons on the ground could be injured.

To address this potential unsafe condition, Cameron Balloons Ltd. issued the Service Bulletin to provide instructions for the removal from service of the affected parts.

For the reasons described above, this [CAA] AD retains the requirements of CAA Emergency AD G-2021-0010-E dated 01 October 2021, which required a one-time inspection of each affected fuel cylinder for leakage around the threaded joint between the QSO valve adaptor flange and the cylinder boss and, depending on findings, removal from service of the affected fuel cylinder. The AD also required modification of each fuel cylinder by replacement of the affected part with a serviceable part.

Since AD G-2021-0010-E was issued, additional applicability information has been released by the manufacturer, Cameron Balloons Ltd. Additional

serial number applicability for CB2902 Cylinders has been identified and added to the list of affected parts. (See [CAA AD] appendix 1).

For the reason described above AD 2021-0010-E, was superseded by AD G-2021-0014-E which expands the list of affected parts.

Since the issue of AD G-2021-0014-E additional information pertaining to the means of visual identification of the affected parts has been released by the manufacturer, Cameron Balloons Ltd. It was also found that that the replacement part specified in the previous [emergency airworthiness directives] EADs, Part No. CB437 'Issue G' did not go into production and instead 'Issue H' was produced.

For the reasons described above this [CAA] AD has been revised to include additional information in the applicability, the inclusion of photos ([CAA AD] figures 2, 3 and 4) and to reference the correct replacement part number (updated drawing issue).

This revised [CAA] AD also introduces editorial changes not affecting the requirements.

You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1171.

Cameron identified fuel cylinder P/Ns CB2901, CB2902, and CB2903 that had the non-conforming QSO flange adapter P/N CB437 Issue F installed at manufacture. However, the following additional fuel cylinders that were not fitted with flange adapter P/N CB437 Issue F at manufacture may have been later retrofitted with P/N CB437 Issue F: fuel cylinder P/Ns CB2901, CB2902, and CB2903; stainless steel fuel cylinder P/Ns CB426, CB497, CB599, CB959, CB2088, V20, V30, and V40; titanium fuel cylinder P/Ns CB2380, CB2383, CB2385, CB2387, and T30 (CY-050-A-001); and "Worthington" aluminum fuel cylinder P/N CB250.

The unsafe flange adapter has "CB437" machine-engraved on the part. Flange adapters with "CB437" hand-stamped on the part or machine-engraved with Issue H ("CB437/H") or later issue are not subject to the unsafe condition.

### **Related Service Information under 1 CFR Part 51**

The FAA reviewed Cameron Balloons CBL/TN/DCB/3287, Issue C, dated October 14, 2021, which specifies procedures for torque testing fuel cylinders and for replacing the handwheel valve or flange adapter. This service information is reasonably

available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

### **Other Related Service Information**

The FAA reviewed Cameron Balloons Service Bulletin No. 32, Revision 4, dated November 3, 2021. This service information specifies procedures for identifying affected parts (including figures illustrating both the unsafe and safe flange adapters). This service information also specifies inspecting fuel cylinders for leakage.

### **FAA's Determination**

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information referenced above. The FAA is issuing this AD after determining the unsafe condition is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD requires accomplishing the actions specified in the service information described previously.

### **Differences Between this AD and the MCAI**

The MCAI identifies affected fuel cylinders by serial number or invoice number, while this AD identifies affected fuel cylinders by the type of engraving of P/N CB437 on the flange adapter.

The MCAI applies to hot air balloons and certain airships. This AD only applies to hot air balloons because the airships identified in the MCAI do not have an FAA type certificate.

### **FAA's Justification and Determination of the Effective Date**

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or contrary to the public interest." Under this section, an agency, upon

finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because a liquid propane leak could result in an inflight fire, damaging the balloon and leading to a forced emergency landing, which could injure balloon occupants and persons on the ground. In addition, some of the corrective actions must be accomplished before further flight. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forego notice and comment.

### **Comments Invited**

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-1171 and Project Identifier MCAI-2021-01361-Q” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

## **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Mike Kiesov, Aviation Safety Engineer, FAA, General Aviation & Rotorcraft Section, International Validation Branch, 901 Locust, Room 301, Kansas City, MO 64106. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Regulatory Flexibility Act**

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

## **Costs of Compliance**

The FAA estimates that this AD affects 396 fuel cylinders installed on hot air balloons worldwide. The FAA has no way of knowing the number of the hot air balloons of U.S. Registry that may have an affected fuel cylinder installed. The estimated cost on U.S. operators reflects the maximum possible cost based on fuel cylinders worldwide. The average labor rate is \$85 per work-hour.

The FAA estimates that replacing the QSO flange adapter will take 1 work-hour and require parts costing \$80, for a cost of \$165 per adapter and up to \$65,340 for the U.S. fleet.

The FAA also estimates that it will take about 1 work-hour per hot air balloon to inspect the fuel cylinder for leakage for a cost of \$85 per hot air balloon and up to \$33,660 for the U.S. fleet. In addition, the FAA estimates that the torque test will take 1 work-hour for a cost of \$85 per hot air balloon. The FAA has no way of determining the number of hot air balloons that may need the torque test.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.



## **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2022-01-06 Cameron Balloons Ltd.:** Amendment 39-21894; Docket No. FAA-2021-1171; Project Identifier MCAI-2021-01361-Q.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

(1) This AD applies to hot air balloons, certificated in any category, with the following Cameron Balloons Ltd. fuel cylinder if fitted with a flange adapter with part number (P/N) CB437 machine-engraved on the flange adapter:

(i) P/Ns CB2901, CB2902, and CB2903;

(ii) Stainless steel fuel cylinder P/Ns CB426, CB497, CB599, CB959, CB2088, V20, V30, and V40;

(iii) Titanium fuel cylinder P/Ns CB2380, CB2383, CB2385, CB2387, and T30 (CY-050-A-001); and

(iv) “Worthington” aluminum fuel cylinder P/N CB250.

Note 1 to paragraph (c)(1): Figures 1 through 3 of Cameron Balloons Service Bulletin SB No. 32, Revision 4, dated November 3, 2021, show examples of flange adapters with P/N CB437 machine-engraved and hand-stamped.

(2) The affected fuel cylinders may be installed on hot air balloons models including, but not limited to, those of the following design approval holders:

- (i) Aerostar International, Inc.;
- (ii) Ballonbau Worner GmbH;
- (iii) Balóny Kubíček spol. s.r.o.;
- (iv) Cameron Balloons Ltd.;
- (v) Eagle Balloons Corp.;
- (vi) JR Aerosports, Ltd (type certificate previously held by Sundance Balloons (US));
- (vii) Lindstrand Balloons Ltd.; and
- (viii) Michael D. McGrath (type certificate subsequently transferred to Andrew Philip Richardson, Adams Aerostats LLC).

**(d) Subject**

Joint Aircraft System Component (JASC) Code 2800, Aircraft Fuel System.

**(e) Unsafe Condition**

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as fuel cylinder leakage of liquid propane caused by impinged threading on cylinder bosses having loose quick shut-off (QSO) flanged adaptors. The FAA is issuing this AD to detect and prevent fuel leakage of liquid propane. The unsafe condition, if not addressed, could result in a fire and consequent emergency landing.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Actions**

(1) Before further flight after the effective date of this AD, inspect each fuel cylinder for leakage around the threaded joint between the QSO valve adaptor flange and the cylinder boss using leak detector fluid.

(i) If there is any leakage, before further flight, replace the fuel cylinder with one that has a handwheel valve or flange adapter installed by following the instructions in

Section 3.2 or 3.3 of Cameron Balloons CBL/TN/DCB/3287, Issue C, dated October 14, 2021.

(ii) If there is no leakage, before further flight, do a torque test of the fuel cylinder by following Section 2 of Cameron Balloons CBL/TN/DCB/3287, Issue C, dated October 14, 2021. If the fuel cylinder fails the torque test, before further flight, replace the fuel cylinder with one that has a handwheel valve or flange adapter installed by following the instructions in Section 3.2 or 3.3 of Cameron Balloons CBL/TN/DCB/3287, Issue C, dated October 14, 2021.

(2) Within 4 months after the effective date of this AD, unless done before further flight in paragraph (g)(1)(i) or (ii) of this AD, replace the flange adapter by following Section 3.3 of Cameron Balloons CBL/TN/DCB/3287, Issue C, dated October 14, 2021.

Note 2 to paragraph (g)(2): You may replace the flange adapter in accordance with paragraph (g)(2) of this AD before further flight after the effective date of this AD instead of doing the inspection in paragraph (g)(1) of this AD.

(3) As of the effective date of this AD, do not install on any hot air balloon a fuel cylinder with a flange adapter with a machine-engraved P/N CB437, unless it is engraved Issue H (“CB437/H”) or later.

#### **(h) Special Flight Permit**

Special flight permits are prohibited.

#### **(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD and email to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

(1) For more information about this AD, contact Mike Kiesov, Aviation Safety Engineer, FAA, General Aviation & Rotorcraft Section, International Validation Branch, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4144; email: [mike.kiesov@faa.gov](mailto:mike.kiesov@faa.gov).

(2) Refer to United Kingdom (UK) Civil Aviation Authority (CAA) AD G-2021-0014R1-E, dated December 10, 2021, for more information. You may examine the UK CAA AD in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1171.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Cameron Balloons CBL/TN/DCB/3287, Issue C, dated October 14, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Camron Balloons Ltd., St John Street, Bedminster, Bristol, BS3 4NH, United Kingdom; phone: +44 0 117 9637216; email: [technical@cameronballoons.co.uk](mailto:technical@cameronballoons.co.uk).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on December 23, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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